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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,178	02/17/2004	Richard Neil Swartout	129913	9864

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EXAMINER	
MULLINS, BURTON S	

ART UNIT	PAPER NUMBER
2834	

DATE MAILED: 03/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/780,178	SWARTOUT ET AL.
	Examiner	Art Unit
	Burton S. Mullins	2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,7-11,13-17,19 and 20* is/are rejected.

7)☒ Claim(s) *5,6,12 and 18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 12 July 2004 has been considered by the examiner.

Claim Rejections - 35 USC § 112

2. Claims 13 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In the phrase "said measurement apparatus is further configured to transition...," use of the word "transition" as a verb renders the phrase vague and meaningless since it is not clear if this implies a structure or whether this just means the apparatus moves along the slot. For purposes of examination, the latter interpretation will be taken.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-4, 7-11, 13-17 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bissonnette et al. (US Patent Application Publ. 2004/0135588). Bissonnette

teaches a non-intrusive method and apparatus for measuring distance, in particular thickness of a dielectic material comprising a ripple spring in a generator to measure wedge tightness. Bissonnette teaches a top ripple spring 11 positioned at least partially within a stator slot defined within the electromechanical device (Fig.1); mapping a profile of the top ripple spring, i.e., measuring the air gap 2 (p.34) between the wedge 13 (or quoin 19) and bar 9 (or packing material 17) (p.33), and using the mapped profile to determine the wedge tightness in the electromechnnical device (a voltage output corresponding to the air gap is obtained, which in turn is a function of thickness of the air gap, i.e., thickness of the spring, p.8, p.31-34, p.52-p.58). When the ripple spring is flat, the wedge tightness is optimal; when an air gap appears, the wedge is loose (p.33).

Bissonnett differs in that the spring 11 is made of composite, i.e., non-conductive material, and does not also include "a conductive portion" as claimed.

Elton teaches a generator including ripple spring 30 comprising a conductive, i.e., semi-conductive layer/portion substantially covering the non-conductive, fiberglass-reinforced portion of the spring (c.5, lines 20-23). The semi-conductive portion on the spring prohibits development of corona in the particular region of the slot near the spring (c.5, lines 23-28), since corona discharge is grounded out by contact of the semi-conductive portion with the slot wall.

It would have been obvious to modify Bissonnett and provide a conductive portion on the spring per Elton since this would have been desirable to prevent corona discharge in the area of the spring.

Regarding claim 8, the measuring apparatus in Bissonnett includes sensor 6.

Regarding claim 15, plural wedges are inherent to both Elton and Bissonnett since there are plural stator slots. See also Bissonnett p.33.

Regarding claims 2, 9 and 16, this is inherent to Bissonnett since the measured voltage levels or "mapped" air gap thicknesses correlate to the degree of spring pressure, i.e., when the ripple spring is flat, there is a certain pressure on the spring; when an air gap appears, pressure on the spring reduces.

Regarding claims 3 and 10 see Bissonnett p.33.

Regarding claims 4, 11 and 17, Bissonnett's wedge 13 inherently compresses the spring to some degree. The specific compression would be a matter of engineering design dependent upon the spring structure and the desired tightness, among other factors.

Regarding claims 7, 14 and 20, Elton's semi-conductive portion covers the spring and hence would take on a similar profile as the spring.

Regarding claims 13 and 19, as best understood, Bissonnett's sensor 6 moves along the slot and collects thickness data and thus can be considered to "transition along said stator."

Allowable Subject Matter

5. Claims 5-6, 12 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In Bissonnett (p.39-55), the sensor 6 functions as a capacitive sensor, with the size of the air gap correlated to measured capacitance of the wedge 13 and air gap 2. There is no fair teaching that the stator excitation coil transmits energy to the conductive portion of the top ripple spring and a sensing coil receives energy reflected from the conductive portion as claimed.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Burton S. Mullins whose telephone number is 571-272-2029. The examiner can normally be reached on Monday-Friday, 9 am to 5 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Burton S. Mullins
Primary Examiner
Art Unit 2834

bsm
3 March 2006